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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,264	09/28/2000	Nobuyoshi Morimoto	5596-00500	1006

7590

04/26/2004

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EXAMINER

FUREMAN, JARED

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/675,264	Applicant(s) MORIMOTO, NOBUYOSHI	
	Examiner Jared J. Fureman	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 50-83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 50-83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/05/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of the amendment and IDS, filed on 2/5/2004 both of which have been entered in the file. Claims 50-83 are pending.

Claim Objections

1. Claim 83 is objected to because of the following informalities: Claim 83, line 4: "containers" should be replaced with --container--. Appropriate correction is required.

Claim Rejections - 35 USC § 103


2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 65-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley et al (US 5,804,810, previously cited) in view of Lubenow et al (US 5,715,398, previously cited) and Harris et al (US 5,466,030, previously cited).

Woolley et al teaches an apparatus (a PDA 270), comprising: a processor (necessarily present in a PDA); a data interface coupled to the processor (an infrared interface, as shown in figure 18); a power supply coupled to the processor (necessarily present in a PDA); wherein the processor is configured to cause the data interface to read information from a memory device (a tag 16) affixed to or contained within a first carrier (truck 12₆, for example) item container (12₁) stored within the first carrier at an intermediate destination (a stop); wherein, from the information, said processor is configured to determine an item container to be removed from a storage location of the

first carrier; wherein the processor is further configured to obtain shipping information from a server computer (operations center 13) to use with the information read from the memory device to determine an item container to be removed from the first carrier; wherein the processor is configured to obtain updated shipping information at the intermediate destination from the server computer which is different from and overrides information from the memory device; wherein the data interface is a wireless infrared communication link (see figure 18); wherein the processor is configured to update the information stored in the memory device through the data interface when the item container is removed from the first carrier; wherein the processor is configured to upload some or all of the updated information stored on the memory device to a computer network (operations center 13); wherein said memory device comprises active memory (memory 104); wherein the information includes shipping information for each of a plurality of item containers (12₁) stored in storage locations of the first carrier; wherein processor is configured to read global positioning system position information from the memory device through the data interface; wherein the processor is configured to upload the position information stored on the memory device to a server computer (operations center 13); wherein the processor configured to read data from the memory device on one or more environmental parameters comprising temperature (provided by sensors 18); wherein the processor configured to determine if a threshold has been exceeded for one of the one or more environmental parameters during shipping; wherein the apparatus is hand-held (see the relevant portions of Woolley et al, Lubenow et al and Harris et al, noted above).



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Woolley et al fails to specifically teach wherein from the information stored in the memory device, the processor is configured to determine that the item container removed from a storage location of the first carrier should be inserted into a storage location of a second carrier to be shipped to a different final destination than the first carrier.

Lubenow et al teaches a method, comprising: shipping a first carrier (a truck, for example) to an intermediate destination (a stopoff location), wherein the first carrier stores item containers (containers being shipped in the truck, for example); removing an item container at the intermediate destination; inserting the removed container into a second carrier; and shipping said second carrier to a final destination different than a final destination of the first carrier; wherein the item container removed at the intermediate destination is to be shipped to its final destination by a different shipping company (the U.S. Postal Service, for example) than by which the item container was shipped to the intermediate destination (via private carrier, for example) (see figures 7A-7E, column 3 lines 15-50, column 4 lines 31-48, column 12 lines 33-62, and column 17 lines 6-13).

In view of Lubenow et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Woolley et al, wherein from the information stored in the memory device, the processor is configured to determine that the item container removed from a storage location of the first carrier should be inserted into a storage location of a second carrier

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to be shipped to a different final destination than the first carrier, in order to utilize the most cost effective shipping method.

Woolley et al as modified by Lubenow et al fails to specifically teach removing and inserting the carriers on an individual basis.

Harris et al teaches a carrier (vehicle 10) including a plurality of storage locations (on deck 18) each configured to store a container (cargo), each storage location being configured to permit a container to be removed or inserted without removing other storage containers stored in other storage locations (the vehicle is configured to be side-loaded/unloaded, thereby allowing individual loading/unloading of cargo without the need to disturb the remaining cargo on the deck) (see figures 1, 2, column 1 lines 5-20, 40-50, column 4 lines 45-53, and column 7 lines 3-10).

In view of Harris et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Woolley et al as modified by Lubenow et al, removing and inserting the carriers on an individual basis, in order to permit individual access to each container thereby increasing the convenience and efficiency of the system.

4. Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley et al as modified by Lubenow et al and Harris et al, in view of Herrod et al (US 2001/0043273 A1, previously cited).

The teachings of Woolley et al as modified by Lubenow et al and Harris et al have been discussed above.

Woolley et al as modified by Lubenow et al and Harris et al fails to specifically teach the apparatus further comprising a digital camera, wherein the processor is configured to download one or more images of the item container or item stored therein at the intermediate destination to the memory device through the data interface.

Herrod et al teaches an apparatus (terminal 10) including a processor (not shown) and a digital camera (a digital camera having lens 18) connected to the processor, wherein the processor is configured to store images of a parcel/goods being shipped in a memory device (a bar code symbol) applied to the parcel/goods (see figure 5 and paragraphs 25, 27, 28, 46-49, and 66).

In view of Herrod et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Woolley et al as modified by Lubenow et al and Harris et al, the apparatus further comprising a digital camera, wherein the processor is configured to download one or more images of the item container or item stored therein at the intermediate destination to the memory device through the data interface, in order to provide the ability to compare the condition of a parcel upon receipt to the condition of the parcel when shipped, thereby identifying any damage to the parcel during shipping.

5. Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley et al as modified by Lubenow et al and Harris et al in view of Kern (US 6,115,695, previously cited).

The teachings of Woolley et al as modified by Lubenow et al and Harris et al have been discussed above.

Woolley et al as modified by Lubenow et al and Harris et al fails to specifically teach the apparatus including a digital scale connected to the processor, wherein the processor is configured to compare a weight measured by the digital scale with weight information stored in the memory device.

Kern teaches an apparatus including a processor (12) and a digital scale (20), wherein the processor is configured to compare a weight measured by the digital scale with weight information stored in a memory device (bar code 18) (see figures 1, 2, column 1 line 10 - column 2 line 18 and column 3 lines 5-41).

In view of Kern's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Woolley et al as modified by Lubenow et al and Harris et al, the apparatus including a digital scale connected to the processor, wherein the processor is configured to compare a weight measured by the digital scale with weight information stored in the memory device, in order to detect the accuracy of an order and detect pilferage.

6. Claims 81 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley et al as modified by Lubenow et al and Harris et al in view of Angell et al (US 5,015,145, previously cited).

The teachings of Woolley et al as modified by Lubenow et al and Harris et al have been discussed above.

Woolley et al as modified by Lubenow et al and Harris et al fails to specifically teach a conveyer belt coupled to the processor and configured to move the container;

and an automated arm coupled to the processor and configured to insert or remove the container from a carrier.

Angell et al teaches an apparatus for loading cargo, the apparatus includes a conveyor belt (20) configured to move containers and an automated arm (36) configured to insert or remove the container into a carrier (the cargo compartment of a vehicle), both the conveyor belt and automated arm being connected to a processor (computer control unit 46) (see figures 1, 3, column 1 line 55 - column 2 line 3, column 2 lines 35-46, column 2 line 66 - column 3 line 9, column 3 lines 20-25, and column 4 lines 60-68).

In view of Angell et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Woolley et al as modified by Lubenow et al and Harris et al, a conveyor belt coupled to the processor and configured to move the container; and an automated arm coupled to the processor and configured to insert or remove the container from a carrier, in order to provide an automated carrier loading system thereby reducing the amount of labor required to load carriers.

7. Claims 50-64 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley et al in view of Lubenow et al, and Smethwick et al (US 5,145,307).

Woolley et al teaches a method, comprising: shipping a first carrier (truck 12₆, for example) to an intermediate destination (a particular stop), wherein said first carrier comprises a plurality of storage locations each configured to store an item container (as shown in figure 6, the truck 12₆ has a plurality of storage locations for storing containers

12₁); at the intermediate destination, removing one of the item containers from said first carrier according to information stored in a memory device (memory 104 of tag 16₆ or tag 16₁) affixed to or contained within the first carrier or the item container being removed; further comprising updating the information stored in said memory device when the item container is removed from said first carrier or inserted to said second carrier; further comprising uploading some or all of the updated information stored on the memory device to a computer network (operations center 13); wherein said memory device comprises active memory (memory 104); wherein said uploading comprises interfacing to said memory device with a wireless (radio frequency) communication link; wherein said memory device is affixed to or contained within the item container removed at the intermediate destination (as in tag 16₁); wherein said memory device is affixed to or contained within said first carrier (as in tag 16₆); wherein the information includes shipping information for each of a plurality of item containers stored in the storage locations of said first carrier (a unique identification, shipper, planned route, waypoints, destination, etc); wherein the memory device comprises a global positioning system unit (a GPS sensor, one of sensors 18) configured to update the information with position information for the memory device; further comprising uploading the position information stored on the memory device to a computer network (operations center 13); wherein the memory device comprises one or more environmental sensors (sensors 18) configured to update the information with data on one or more environmental parameters comprising temperature; wherein the memory device is configured to record in the information if a threshold is exceeded for one of the one or

more environmental parameters during shipping; wherein the memory device is configured to record a log of measurements for the one or more environmental parameters measured during shipping; wherein said first carrier and said second carrier are configured to store an over-sized item container in two or more adjacent ones of their respective storage locations (naturally, a larger container will occupy the space of two or more locations used by smaller containers in the truck) (see figures 1-3, 5, 6, 8, 11, column 1 line 54 - column 2 line 11, column 4 lines 6-19, 40-53, column 4 line 66 - column 5 line 16, column 13 lines 5-12, column 16 lines 8-67, column 17 lines 3-15, column 17 line 44 - column 19 line 31, column 19 line 57 - column 20 line 58, column 21 line 26 - column 22 line 4, column 25 line 15 - column 26 line 30, column 30 lines 37-43, column 57 lines 36-52, column 62 line 64 - column 64 line 29).

Woolley et al fails to specifically teach inserting the item container removed from the first carrier into one of a plurality of storage locations of a second carrier configured to store the item container; and shipping said second carrier to a final destination different than a final destination of the first carrier; wherein the information stored in memory device indicates that the item container removed at the intermediate destination is to be shipped to its final destination by a different shipping company than by which the item container was shipped to the intermediate destination.

Lubenow et al teaches a method, comprising: shipping a first carrier (a truck, for example) to an intermediate destination (a stopoff location), wherein the first carrier stores item containers (containers being shipped in the truck, for example); removing an item container at the intermediate destination; inserting the removed container into a

second carrier; and shipping said second carrier to a final destination different than a final destination of the first carrier; wherein the item container removed at the intermediate destination is to be shipped to its final destination by a different shipping company (the U.S. Postal Service, for example) than by which the item container was shipped to the intermediate destination (via private carrier, for example) (see figures 7A-7E, column 3 lines 15-50, column 4 lines 31-48, column 12 lines 33-62, and column 17 lines 6-13).

In view of Lubenow et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the method as taught by Woolley et al, inserting the item container removed from the first carrier into one of a plurality of storage locations of a second carrier configured to store the item container; and shipping said second carrier to a final destination different than a final destination of the first carrier; wherein the information stored in memory device indicates that the item container removed at the intermediate destination is to be shipped to its final destination by a different shipping company than by which the item container was shipped to the intermediate destination, in order to utilize the most cost effective shipping method.

Woolley et al as modified by Lubenow et al fails to specifically teach the carrier comprising a plurality of discrete storage compartments configured to store a multi-dimensional array of item containers, wherein each compartment is configured to permit its item container to be removed on an individual basis without removing other item containers in other ones of the storage compartments; removing on an individual basis one of the item containers from said first carrier; inserting on an individual basis an item

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container into one of a plurality of storage locations of a carrier configured to store the item container.

Smethwick et al teaches a carrier (vehicle 10 having chassis assembly 14) comprising a plurality of discrete storage compartments (portions 32a and 32b) each configured to store a multi-dimensional array (see figure 2) of item containers (12) , wherein each compartment is configured to permit its item container to be removed on an individual basis without removing other item containers in other ones of the storage compartments (see figures 1-3, column 1 lines 48-52, column 3 lines 5-12, and column 3 lines 59 - column 4 line 22).

In view of Smethwick et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the method as taught by Woolley et al as modified by Lubenow et al, the carrier comprising a plurality of discrete storage compartments configured to store a multi-dimensional array of item containers, wherein each compartment is configured to permit its item container to be removed on an individual basis without removing other item containers in other ones of the storage compartments; removing on an individual basis one of the item containers from said first carrier; inserting on an individual basis an item container into one of a plurality of storage locations of a carrier configured to store the item container, in order to permit individual access to each container thereby increasing the convenience and efficiency of the system.

Response to Arguments

8. Applicant's arguments filed 2/5/2004 have been fully considered but they are not persuasive.

In response to applicant's argument that Woolley et al teaches that routing of items is controlled from operations center 13, if the route is changed, not according to information contained within a memory device affixed to or contained within said first carrier or the item container being removed (see pages 9-11, of the amendment filed on 2/5/2004), Woolley et al teaches that the tag stores a unique identification, a description, the shipper, and destination of the object (a container, for example) to which the tag is attached (see column 2, lines 4-11, and column 57, lines 36-52, for example). While a new route may be transmitted from the operations center 13, the new route is also written into the memory of the tag (see column 17, lines 12-14). Thus, the new route is stored in the memory of the tag, and is available to be read out of the tag. Therefore, Woolley et al teaches that routing of the items is controlled by information contained within a memory device affixed to or contained within the first carrier or the item container.

9. Applicant's other arguments with respect to claims 50 (see page 10, of the amendment filed on 2/5/2004) have been considered but are moot in view of the new ground(s) of rejection.

As discussed above, Smethwick et al teaches a carrier comprising a plurality of discrete storage compartments each configured to store a multi-dimensional array of item containers, wherein each compartment is configured to permit its item container to

be removed on an individual basis without removing other item containers in other ones of the storage compartments.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schoen et al (US 2004/0021572), Sando (US 2003/0101069), DeMaggio (US 2002/0138352), Diaz (US 6,539,296), Ross et al (US 2001/0041948), and Ross et al (US 6,332,098) all teach methods and apparatus for shipping objects.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared J. Fureman whose telephone number is (571)

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272-2391. The examiner can normally be reached on 7:00 am - 4:30 PM M-T, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jared J. Fureman
Jared J. Fureman
Examiner
Art Unit 2876

April 18, 2004

